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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,122	09/15/2003	Bruno Greppi	60681.300101	7151

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MICHAEL J. HUGHES, Esq.
IPLO
Intellectual Property Law Offices
1901 S. Bascom Avenue, Suite 660
Campbell, CA 95008

EXAMINER

WILLIAMS, THOMAS J

ART UNIT PAPER NUMBER

3683

DATE MAILED: 07/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/667,122

Applicant(s)

GREPPI, BRUNO

Examiner

Thomas J. Williams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 0204 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. Acknowledgment is made in the receipt of the oath filed December 29, 2003 and the drawings filed March 29, 2004.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference character(s) mentioned in the description: reference number "14" does not appear in the drawings filed March 29, 2004. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to because figure 2 contains a reference number as question marks "??". Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

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consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the subject matter of claim 15 and the subject matter regarding an angle of incidence between 0 and -45 degrees of claim 3 is not disclosed.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-11, 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by US 2,516,966 to Du Bois.

Re-claims 1 and 8, Du Bois discloses a brake disk, comprising : a disk member having an inner rim, an outer rim, an obverse face, and a reverse face, the faces are provided with

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circumferentially alternating protruding segments 18 and indented segments 14, the protruding segments will engage brake pads, the indented segments will facilitate cooling.

Re-claims 2, 4, 6, 7, 9, 10, 13 and 14, see figures 1 and 2.

Re-claim 3, the angle of incidence for the leading edge of the protruding segment 18 is between +45 degrees and -45 degrees. A vertical wall (interpreted as 0 degrees) is between the recited angles.

Re-claim 5, the outer rim and the inner rim are provided with recesses, which are broadly interpreted as scalloped in shape, this increases surface area which will increase heat dissipation as known in the heat transfer art.

Re-claim 11, the inner rim and the outer rim have an irregular shape, due to the recess portions formed in the surfaces of each rim.

7. Claims 1-4, 6-10, and 12-14 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,536,564 to Garfinkel et al.

Re-claims 1 and 8, Garfinkel et al. discloses in figure 7 a brake disk, comprising : a disk member having an inner rim, an outer rim, an obverse face, and a reverse face, the faces are provided with circumferentially alternating protruding segments 228 and indented segments 230, the protruding segments will engage brake pads, the indented segments will facilitate cooling.

Re-claims 2, 4, 6, 7, 9, 10 and 12-14, see figure 7.

Re-claim 3, the angle of incidence for the leading edge of the protruding segment 18 is between +45 degrees and -45 degrees. A vertical wall (interpreted as 0 degrees) is between the recited angles.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garfinkel et al.

Garfinkel et al. fails to teach the radial angle at which the leading edge engages the brake pad, specifically if it is less than 45 degrees. It would have been obvious to one of ordinary skill in the art as a matter of design choice to have angled the leading edge of Garfinkel et al. with respect to the brake pad at less than 45 degrees, since the applicant fails to disclose that having the leading edge at this angle solves any stated problem or is for any particular purpose and it is the opinion of the examiner that the angle of the leading edge relative to the brake pad in Garfinkel et al. would have performed equally well at any angle less than 45 degrees.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lane, Batchelor et al., Beuchle, Masclet, and Tamura et al. each disclose a brake disc with alternating protruding and indented segments on both the obverse side and reverse side.

11. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Thomas Williams whose telephone number is (703) 305-1346. The examiner can normally be reached on Monday-Thursday from 6:30 AM to 4:00 PM. The examiner can also be reached on alternate Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder, can be reached at (703) 308-3421. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

TJW

July 15, 2004

THOMAS WILLIAMS
PATENT EXAMINER

Thomas Williams
AU 3683
7-15-04